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ABSTRACT

This teaching unit, Scientists, is one in a series of career guides developed by Project CHOICE (Children Have Options in Career Education) to provide the classroom teacher with a source of career-related activities linking third and fourth grade elementary classroom experiences with the world of work. Part of the Science and Engineering Occupations Career Cluster, these eight lessons give an overview of the work of scientists in different fields, discuss career opportunities and special skills scientists need and give examples of special tools and equipment scientists use. An introductory section gives the unit rationale, goals, performance objectives, entry-level assessment, and evaluation. A list of instructional materials, such as films, filmstrips, books, art supplies, and community resources, is included in this section. Each lesson contains a statement of purpose, materials needed for the lesson, an introductory statement, class activities, and a summary activity. Written materials (such as worksheets, surveys, and task cards) are included where feasible. (This guide is one of twenty-four in the series for grades 3 and 4--CE 025 766-789.) (MEK)

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ED187997

OFFICE OF CLAUDE W. RICHARDSON
KERN COUNTY SUPERINTENDENT OF SCHOOLS
Division of Instructional Services

Project CHOICE
#113

A CAREER UNIT FOR GRADES 3 AND 4

SCIENTISTS

(Science and Engineering Occupations Career Cluster)

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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UE 025 780

October, 1979

FOREWORD

Project CHOICE: Children Have Options in Career Education, is an Exemplary Project from the San Diego City School District, which has been adapted, with ESEA Title IV-C funding, for Kern County Schools.

Through Project CHOICE, units have been developed to provide the classroom teacher with a source of career-related activities linking classroom experiences with the world of work. All students, regardless of their post-high school plans, share an equal need for career awareness, decision making skills, and other elements of career education. This goal can be accomplished if all teachers and counselors "fit" the appropriate units where they best apply in the curriculum.

We are indebted to the San Diego City School District, and the Project CHOICE staff, for developing and field testing the original units.

For their excellent work in re-writing the units in order to adapt them for use in Kern County Schools, we wish to recognize:

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Science and Engineering Occupations Career Cluster

SCIENTISTS

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Science and Engineering Occupations Career Cluster

SCIENTISTS

TEACHER'S GUIDE

RATIONALE

Children often hear about scientists or things they do and are curious about them. In this unit they will study the jobs and tools of various scientists. The children will also become aware of how scientists make our lives better.

GOALS

Through this unit, pupils will:

- Learn about different types of scientists.
- Become aware of the different career opportunities in each scientific field.
- Learn about special tools and equipment scientists use.
- Learn some of the special skills scientists need.
- Become aware of how scientists help to make our lives better.

PERFORMANCE OBJECTIVES

By the end of this unit, pupils will be able to:

- Name four or more different kinds of scientists.
- Identify four or more scientists from the work they do.
- Define four or more scientists from their names. (i.e., What is a geologist?)
- State the basic educational needs of a scientist.
- Identify some tools and equipment that scientists use.
- Identify several types of jobs four or more scientists perform.
- Describe how different scientists make our lives better.
- Tell why scientists are important.

ENTRY LEVEL ASSESSMENT
(To be used as a pre-test and post test.)

Use this information about scientists to determine the class awareness of scientists, what they do, and why they are important.

1. Name some different kinds of scientists.

2. What is a geologist? a chemist? a biologist? a meteorologist? an oceanographer? a political scientist?

3. Name some special kinds of tools scientists use.

4. Describe jobs that scientists perform.

5. Tell how much education most scientists need.

6. Identify scientists from these jobs. (The teacher names a job or two for each of the seven scientists included in this unit.)

7. Name some skills scientists need.

8. Tell how different scientists make our lives better.

EVALUATION

The final lesson has been set aside for evaluation. The Entry Level Assessment may be used as a pre-test as well as a post test, or the teacher may wish to develop his/her own. Responses may be taped or written, so that comparisons may be made in order to determine how well pupils have achieved the objectives.

SUGGESTED INSTRUCTIONAL MATERIALS

The following materials and equipment (when available) should be utilized in this unit:

-Films and filmstrips
-Books as listed
-Film and filmstrip projector
-A variety of art materials
-Task cards

Books

Title	Dewey Number	Author
Beneath Land and Sea	551.4	Forsee
Let's Go to a Weather Station	551.59	Wolfe
The True Book of Bacteria	589.9	Frahm
Aluminum	673	Benedict
Famous Scientists	920	Stevens

Films

MP 5197 Rain
MP 5358 What Frost Does
MP 5064 How Weather Helps Us
MP 934 Ocean, A First Film

COMMUNITY RESOURCES

David Moore, Operations Manager, KBAK-TV; 327-7955
Will provide speaker on weather.

Phil Ryall, Consulting Geologist, Bakersfield; 323-7759

Bakersfield College, Community Services Office, 395-4288; ask about possible arrangements for speakers from various science department.

California State College, Bakersfield: Contact staff members in science departments about possible speaker arrangements. 833-2011
Dr. Daniel Jones, Oceanologist & Paleontologist
Dr. Edward Laskowski, Biochemist
Dr. Ted Murphy, Biologist & Environmentalist

TASK CARDS

Task cards may require the help of a tutor or parent volunteer in order for the directions to be read and explained and understood. The size of the group doing the tasks will depend on class make-up and needs. It is not the intention that all task cards be completed by every student. In some instances total group activities of one task card would satisfy the purpose.

INSTRUCTIONAL STRATEGY: Lessons 1-8

Lesson 1

PURPOSE

To learn about the chemist as a scientist, the tools, and what kind of jobs are performed. Also to learn how a chemist makes our life better.

MATERIALS

1. Paper and pencils.
2. Task cards 1 through 6, 33, 34.
3. Manila paper and crayons.

INTRODUCTION

Say: "Today we are going to learn about a chemist. We will learn what jobs he performs, the things he does, and why he is an important scientist."

CLASS ACTIVITIES

1. Class discussion: (suggested ideas for discussion)
   a. Find out what the pupils know or would like to know about chemists or chemistry.
   b. Discuss the chemist's work in hospitals, research centers, factories, and public health.
   c. The chemist usually works in a laboratory and his equipment are glass tubes and bottles for mixing and measuring.
   d. Special skills needed: testing chemicals, measuring, and keeping careful records.
   e. Education: four years of college plus extra years in his specialty.
   f. Most chemists specialize in products such as plastics, food, rubber and oil. Others work on diseases and on health services.
2. Task cards. There are enough task cards to divide the entire class into groups. The teacher should make several copies of the cards.

SUMMARY

1. Individual reports from children using task cards.
2. Review major concepts about chemists.

Lesson 2

PURPOSE

To learn that the geologist is an earth scientist, what work is done, about the tools, and why this is an important scientist.

MATERIALS

Task cards 7 through 11, 33, and 34.

INTRODUCTION

Say: "Today we are going to learn about an earth scientist called a geologist. We will learn about the important work done by geologist and how they do their jobs."

CLASS ACTIVITIES

1. Class discussion: (suggested ideas for discussion)

   a. Find out what the pupils already know, or would like to know, about a geologist.

   b. Tell them that a geologist studies the history, formation and type of rocks on the earth.

   c. Geologists are important because they use studies to discover fuels, minerals, and water supplies. They also make sure land used for buildings and roads is safe.

   d. Geologists do most of their work in the outdoors, but some testing of samples and report writing is done in the laboratory.

   e. Special skills needed: map making, measuring, using special instruments.

   f. Geologists work for oil companies, mining companies, and are used to check building and construction sites to ensure their safety.

   g. A geologist usually needs four years of college, but may require additional special training.

2. Task cards.

SUMMARY

1. Individual reports from task groups.

2. Review major concepts about geologists.

Lesson 3

PURPOSE

To learn that biologists are scientists that study living things; to learn what work they do and how they make out lives better.

MATERIALS

1. Pencils, paper, crayons and manila paper.
2. Task cards 12 through 16, 33 and 34.

INTRODUCTION

Say: "Biologists are important scientists because they only deal with living things, plants and animals. We will learn some of the many important jobs biologists perform and how they make our lives better."

CLASS ACTIVITIES

1. Class discussion: (suggested ideas for discussion)
   a. Find out what class knows or would like to know about biologists.
   b. Biologists usually divide themselves into two groups: botanists study plants and zoologists study animals. However, often the scientist must work with both plants and animals.
   c. Biologists work as researchers to solve problems of disease, test medicines, develop better products for plant growth and develop hybrid plants. They help the farmer by developing better seed and soil. They are teachers. They develop programs for testing food and inspecting animals. They develop new products from plants.
   d. Special skills needed: testing, measurement and keeping careful records.
   e. Education: at least four years of college, but usually need additional special training.
   f. Biologists do their work outdoors or in laboratories depending on the job.
   g. Biologists are important scientists because they work on ways to make us healthier and live longer, help to develop better food and sometimes new foods. Also, they help to improve our environment.
2. Task cards.

SUMMARY

1. Individual reports from pupils using task cards.
2. Review concepts about biologists.

Lesson 4

PURPOSE

To learn that meteorologists are important scientists who study the weather; to learn what work they do, the tools they use, and how they make our lives better.

MATERIALS

1. Lined paper and pencils
2. Manila paper and crayons
3. Task cards 17 through 22, 33, and 34
4. Book: Let's Go to a Weather Station, by Wolfe.
5. Weather from today's newspaper
6. Films or filmstrips about weather, if available (optional)
7. Speaker about weather (see Community Resources section)

INTRODUCTION

Say: "Meteorologists are important scientists who study the weather. We will learn some important jobs they have, learn about the tools they use, and how they help to make our lives better."

CLASS ACTIVITIES

1. Class discussion: (suggested ideas for discussion)

   a. Find out what the class knows or would like to know about meteorologists.

   b. Most people think of a meteorologist as a "weather reporter" on television, but there are other important jobs:
   (1) weather at airports and marine stations;
   (2) research in radioactive fallout; (3) research ways to modify weather; (4) find storm centers, like "Hurricane Hunters": (5) interpret current weather information (air pressure, temperature, humidity, and wind velocity); (6) analyze past records on rainfall, wind, sunshine and snowfall to forecast weather.

   c. Meteorologists work as weather reporters for television, radio and newspapers; the government hires them to work in weather stations all over the world, to help ship and air travel, and to aid the farmer in protecting his crops. In industry they work to solve problems of smoke control and air pollution. They are even hired to induce rain or snow in an area by cloud seeding.

   d. Special tools are the thermometer, rain gauge, weather vane (direction), and the anemometer (speed). The barometer indicates a change in the weather (down means bad weather and up means fair weather.) Weather satellites observe high atmosphere weather so weather can be forecasted for several days in advance.

e. Education is four years of college and additional years for research.

f. Meteorologists make our lives safer by keeping us warned of tornadoes, hurricanes, and other extreme weather conditions. They also protect our food by warning farmers of weather that may ruin their crops.

2. Task cards.

3. Optional: View films about weather.

4. Optional: Listen to visitor speaking about weather.

SUMMARY

1. Individual reports from pupils using task cards.

2. Review major concepts about meteorologists.

Lesson 5 (NOTE: This lesson is an excerpt from Unit #103, Oceanographer. The teacher may wish to use other parts of Unit #103.)

PURPOSE

To become aware of the meaning of oceanography and the general type of work performed by oceanographers.

MATERIALS

1. Film or filmstrip about the ocean and its influence on man.
   Suggested film: Ocean - A First Film, MP 934 (1-3)
   Available at IRC, Superintendent of Schools Office.
2. Film projector.
3. Chart paper and felt pen.
4. Teacher Reference Sheet I.

INTRODUCTION

Say: "Have you ever looked at the ocean and wondered just how big it really was? The Pacific Ocean is so big that a person could sail in a boat for weeks and weeks and never see land. There are many oceans. We are going to learn about the scientists whose job it is to learn all they can about the ocean. They are called oceanographers."

CLASS ACTIVITIES

1. View film or filmstrip.
2. Discuss and list some of the jobs that might be done by people in oceanographic work (the discussion may be based on the information in Teacher Reference Sheet I.)

SUMMARY

1. Review the film or filmstrip.
2. Review discussion concepts about oceanographers.

Teacher Reference Sheet I

Oceanography is the scientific study of all aspects of the oceans, their boundaries, and their contents.

The duties of an oceanographer depend upon his area of specialization.

The Biological Oceanographer (Marine Biologist) studies the ocean's plant and animal life and their environment.

The Physical Oceanographer studies the physical properties of the ocean; the movement of tides and waves; and the sea's relationship to the atmosphere above.

The Geological Oceanographer (Marine Geologist) studies the topographic features, rocks and sediments of the ocean's floor.

The Chemical Oceanographer seeks to determine the chemical composition of the ocean floor and sediments and the various chemical reactions that occur in the sea.

The Marine Meteorologist studies the interaction of the atmosphere and the ocean and the processes by which weather is generated over the ocean.

Oceanographic Engineers design and build systems, devices, and instruments used in oceanographic research and operation.

Approximately three out of four oceanographers are engaged primarily in research and development activities.

Lesson 6

PURPOSE

to learn that political scientists are persons who study governments. To learn what jobs they have and how they help to make our lives better.

MATERIALS

1. Task cards 23 through 26, 33 and 34.
2. Newspaper.
3. List of school rules or Code of Conduct.

INTRODUCTION

Say: "Political Science is the study of government. It includes how governments work and why they do the things they do. The person that studies the government is called a political scientist. We will learn some of the work done and why it is important."

CLASS ACTIVITIES

1. Class discussion: (suggested ideas for discussion)
   a. Find out what the pupils already know or would like to find out about political scientists.
   b. These scientists are mostly hired as college teachers, but also work in international relations, and are hired by governments and political organizations to make surveys of public opinion on laws and projects proposed by governments. They also help analyze relations between governments of different countries. Some of the best known political scientists write for newspapers or appear on television and radio as commentators.
   c. Political scientists work at all levels of government: city, state, national and international levels.
   d. Education: Usually a Master's Degree is required.
   e. Political scientists are important because they help our government make better laws, protect us against bad laws, let our government know how the public feels about what the government is doing, and help us to understand other countries so we can have world peace and good will.
2. Task cards.

SUMMARY

1. Individual reports from pupils working with task cards.
2. Review major concepts of a political scientist.

Lesson 7

PURPOSE

To learn that social scientists study how people behave in different groups. To learn by understanding behavior we can lead happier lives.

MATERIALS

1. Pencils and paper.
2. Manila paper and crayons.
3. Task cards 27 through 32, 33, and 34.
4. Encyclopedia.

INTRODUCTION

Say: "We are going to study an important scientist who studies the way we behave in groups. It is a social scientist. Social scientists are important because they help people solve their problems like crime, poverty, and over-population."

CLASS ACTIVITIES

1. Class discussion (suggested ideas for discussion)
   a. Find out what the class knows or would like to know about the social scientist.
   b. Many social scientists work as college teachers, others work in research to study problems of crime and its prevention, and problems of slums and poverty in large cities. Population movement causes problems of new jobs, good health standards and recreation in the community. They collect information on birth and death rates and on the marriage and divorce rates to show trends.
   c. They are employed by the government, public and private welfare agencies and by industry to solve and improve working condition problems.
   d. Most social scientists need a Master's or Doctoral degree.
   e. The social scientist is important because he helps solve problems of juvenile delinquency, reduce crime and poverty, alcoholism, and drug problems. Solving these problems enables us to live safer and happier in our community.
2. Task cards.

SUMMARY

1. Reports from pupils using task cards.
2. Review important concepts about the social scientist.

Lesson 8

PURPOSE

To enable pupils to assess their knowledge of the scientists studied in this unit.

MATERIALS

1. Tape recorder.
2. Tape from pre-test.
3. Entry Level Assessment.
4. Task cards.

INTRODUCTION

Say: "Today we will find out how much you have learned about scientists. Let's listen to the tape we made before the unit began. Let's find out how much more we know now about scientists."

CLASS ACTIVITIES

1. Listen to pre-test tape.
2. Make a new tape as a post test.
3. Free use of task cards.

SUMMARY

The children should feel free to comment on what they learned. They should also feel free to talk about things they liked and disliked about certain lessons or the unit.

LET'S PRETEND YOU'RE A CHEMIST

You need:

- to listen!
- to think!

Chemists have many different jobs. Some of them are:

1. In hospitals they test the blood and other fluids to help the doctor.
2. In factories they mix special chemicals, see what chemicals will do to things, and invent new products.
3. In the city they test the water to make sure it is pure and make sure foods are safe to eat.
4. Work in special research centers to find cures for diseases and develop new medicines.
5. For our environment they test gas and smoke to keep our air clean and test new kinds of energy.

Pretend you are a chemist. Choose one of the jobs of a chemist. Be ready to tell the class what you would work on and how you would do it.

CHEMISTS ARE IMPORTANT!

You need:

- 12" x 18" manila
- crayons

Chemists are important because they help to make our lives better. They test our water to make sure it is pure, and test our food so we won't get diseases. They test our air. They discover new medicines and cures for diseases.

Can you think of other ways they are important?

Draw a picture showing chemists doing three things that make our lives better. Be ready to explain your pictures to the class.

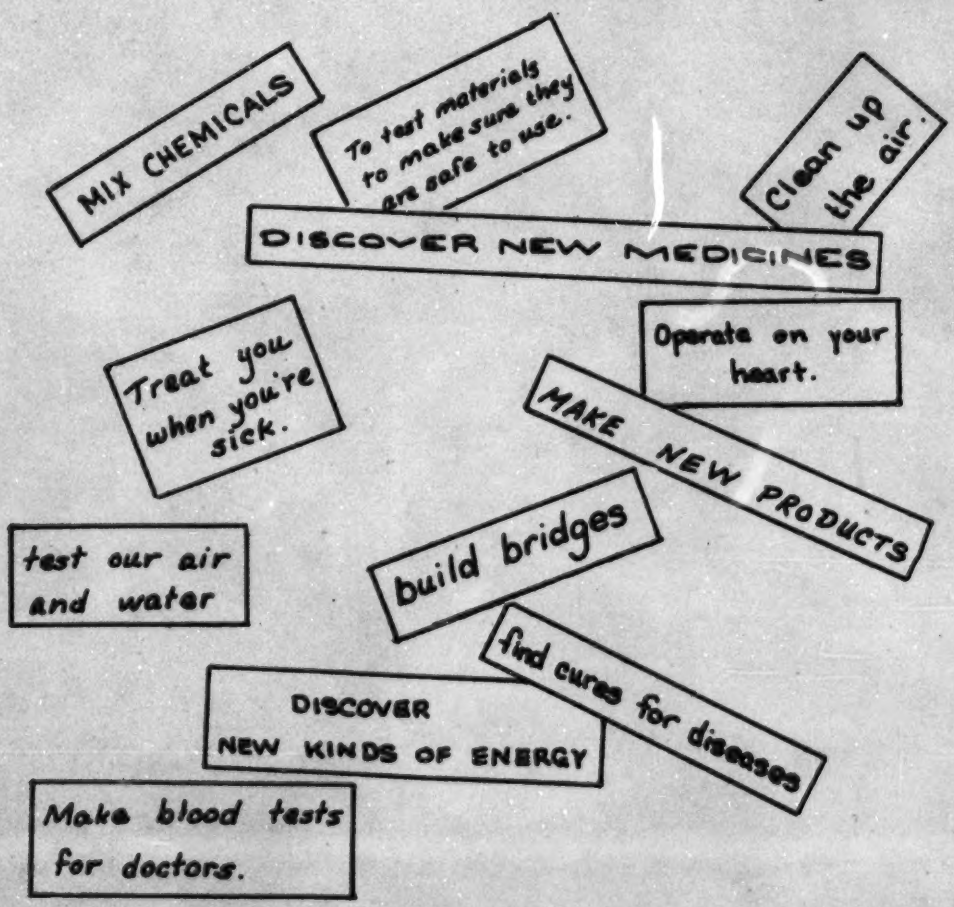
TASK CARD 3

WHICH JOBS DO CHEMISTS DO?

You need:

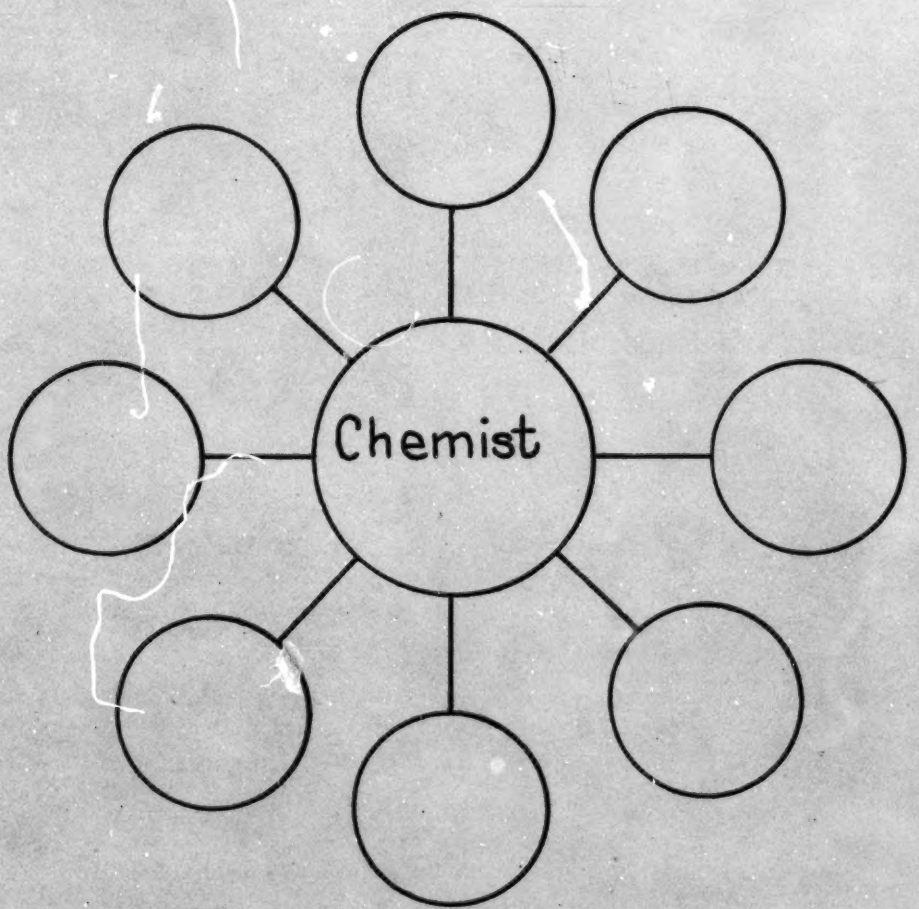
- job wheel
- pencil

Make a job wheel for a chemist. BEWARE!
Some of these jobs are not done by chemists.


MIX CHEMICALS
To test materials to make sure they are safe to use.
Clean up the air.
DISCOVER NEW MEDICINES
Treat you when you're sick.
Operate on your heart.
MAKE NEW PRODUCTS
test our air and water
build bridges
find cures for diseases
DISCOVER NEW KINDS OF ENERGY
Make blood tests for doctors.

TASK CARD 3A

JOB WHEEL*



*To be duplicated by teacher before the lesson or the children can make their own.

TASK CARD 4

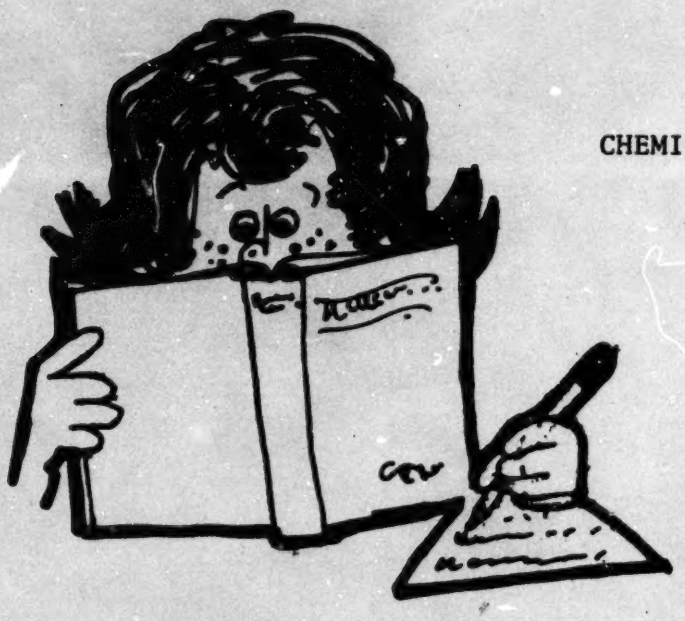
MAD SCIENTIST

You need:

- a good imagination
- manila paper
- crayons
- pencil
- paper

Draw a picture of a mad scientist with a bubbling test tube. Write a story about the experiment your scientist is working on.

TASK CARD 5



CHEMISTS ARE INVENTORS

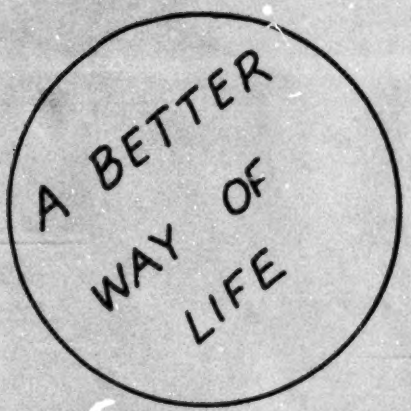
You need:

- magazines or newspapers
- glue
- scissors
- manila paper

Chemists have invented many important materials such as plastic used for garden hoses and toys; nylon used for ladies' hose, clothes, tires, and brushes; neopreme rubber used for foam rubber in cushions and rugs, door seals on refrigerators, and sponges.

Look through the magazines and newspaper and cut out pictures of products made of materials invented by chemists. Arrange them in groups and glue them on your paper.

TASK CARD 6

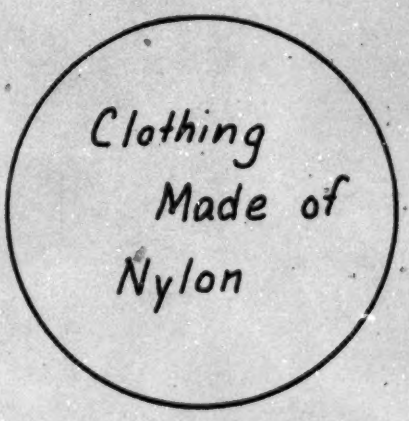


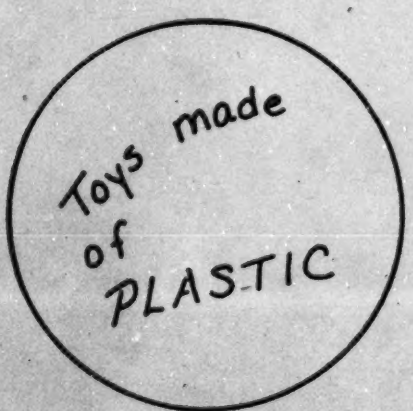
MAKE AN AD

You need:

- pencil
- paper

You work for a chemist. Write an ad to sell the products your chemist is making. Remember! Things made of nylon, plastic and neopreme rubber are made by chemists.





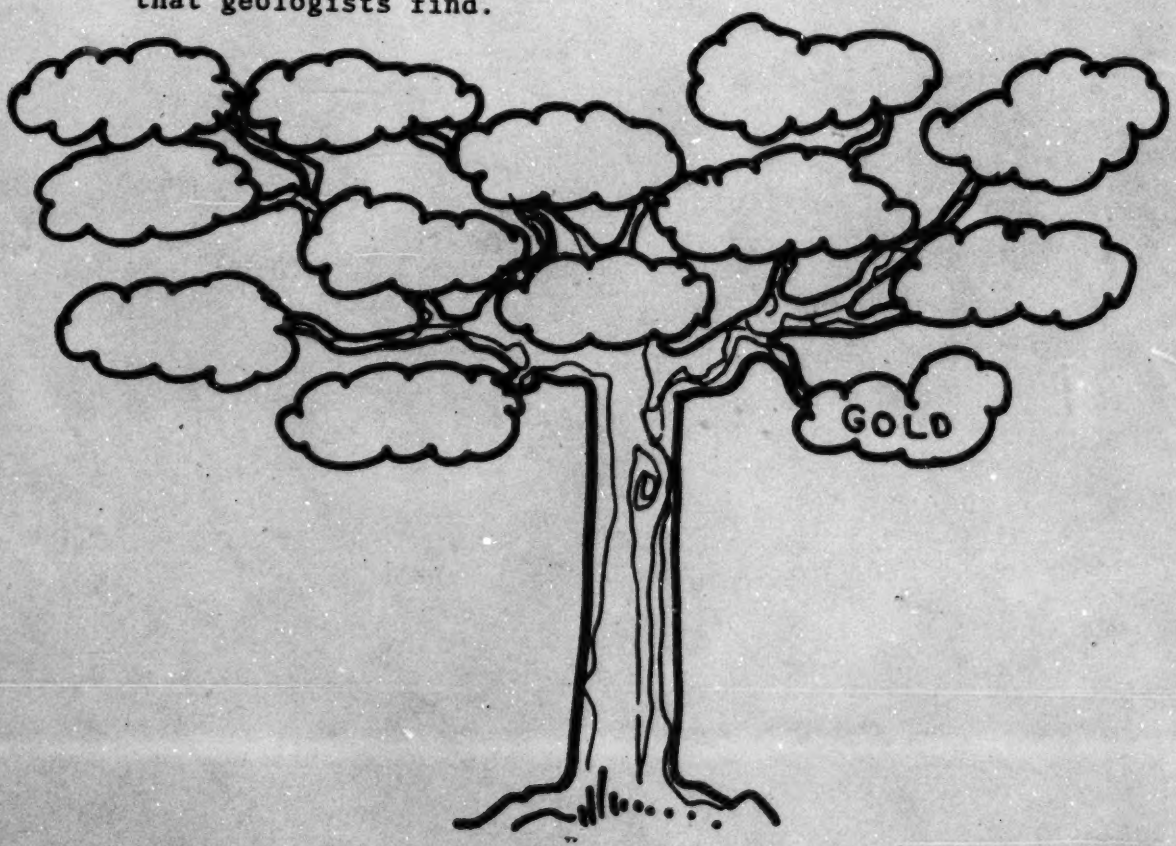
GEOLOGISTS MAKE DISCOVERIES

You need:

- manila paper
- crayons and pencil

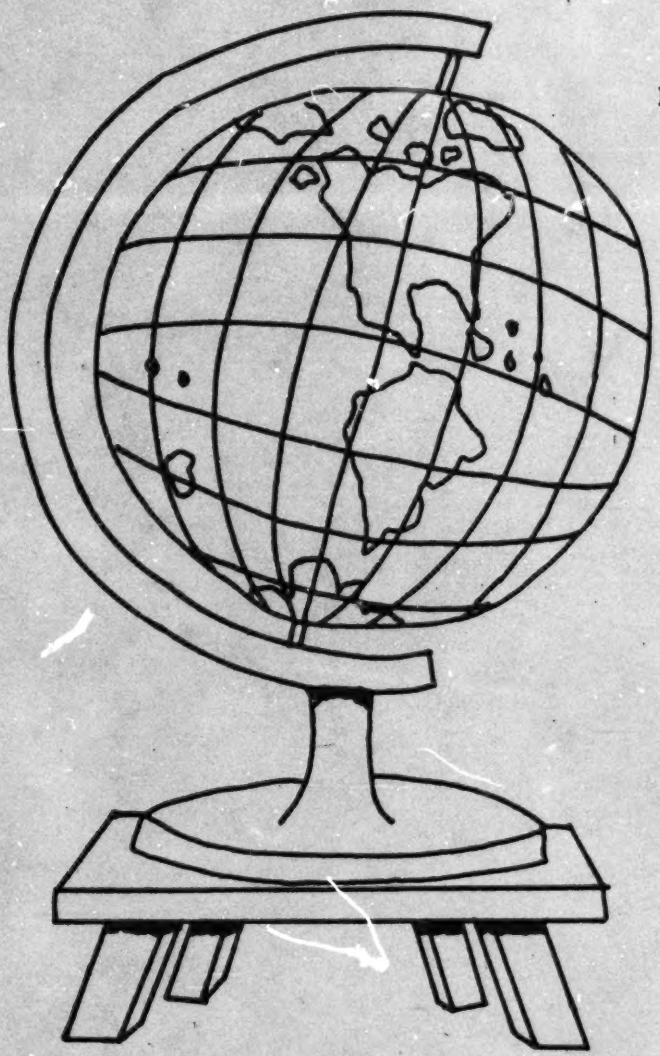
Geologists are important scientists because they can study the earth to find where fuels like oil, coal, and uranium are found. They locate underground water for farmers. Also they locate minerals and ores such as copper, iron, aluminum, silver, gold, and diamonds.

Make a "discovery tree" showing the things geologists help us find. Try to think of other things we get from the ground that geologists find.



TASK CARD 8

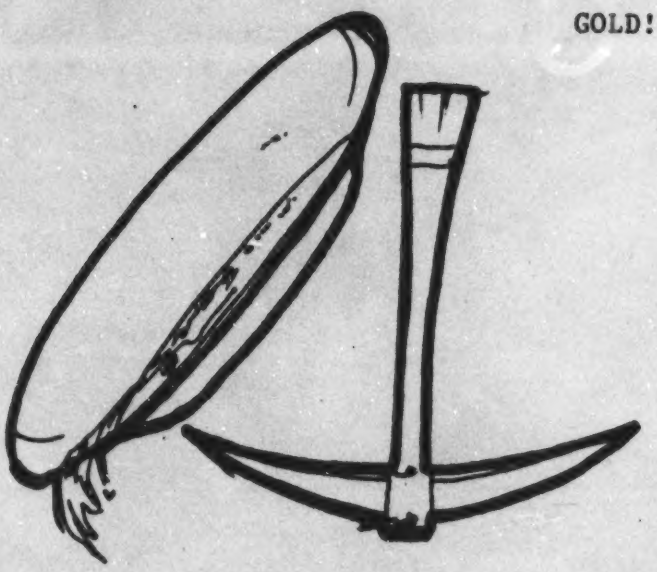
PRODUCTS FROM THE EARTH



You need:

- newspapers
- magazines
- scissors
- glue
- manila paper

Cut out pictures of things made from material in the earth such as fuels, metals, and jewels. Glue them together to make a collage. Aren't we lucky to have geologists to find these materials for us!



GOLD! GOLD!

You need:

- pencil
- paper

You are a geologist and you have just found a new gold field.

1. How would you make sure it was gold?
2. Who would you tell about it? Why?
3. What will you do with the gold?

LET'S PRETEND

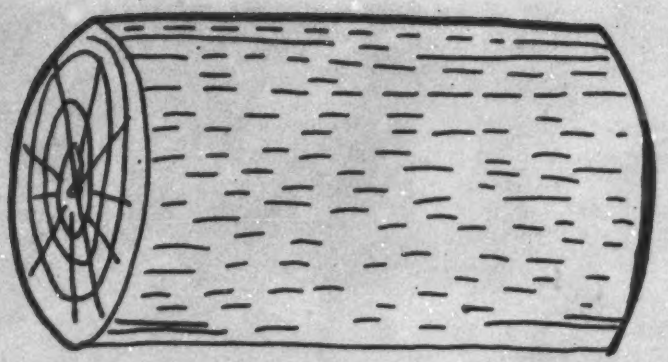
You need:

- manila paper
- crayons
- pencil
- paper

Let's pretend you are a famous geologist.

1. Your first job is working for an oil company.
   What would you do for them? How would you do it?
2. Next you work for a farmer.
   Why would a farmer want to hire you?
   How would you work for him?

Draw a picture showing yourself working at your jobs.



GEOLOGISTS HELP BUILDERS

You need:

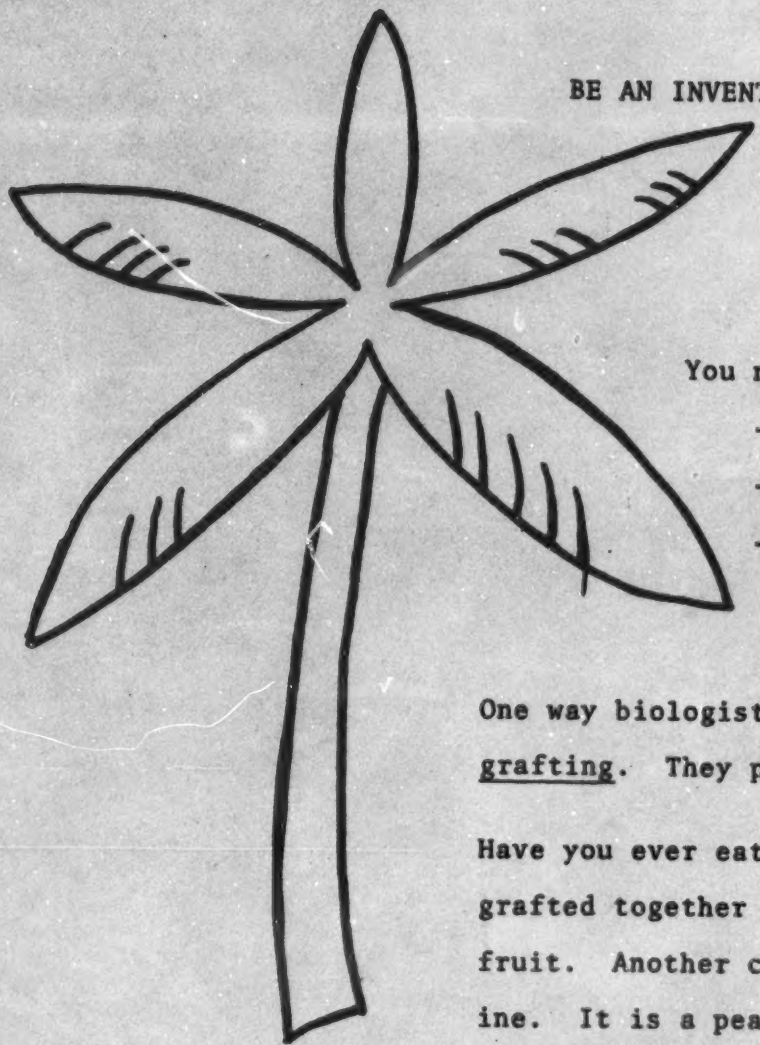
- manila paper
- crayons

Geologists are important scientists because they test the ground of new building sites. They can tell the builder if the ground is safe to build a large building, freeway, or even your new house.

Do you know how it is done? The geologists drill down into the ground and remove a long tube of of soil called a core. They study the core and tell if it is safe to build.

Draw a picture showing a geologist testing the ground.

BE AN INVENTOR



You need:

- manila paper
- crayons
- pencil

One way biologists invent new plants is by grafting. They put two plants together.

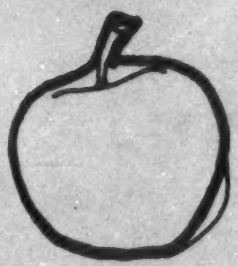
Have you ever eaten a tangelo? A biologist grafted together a tangerine and a grapefruit. Another combined fruit is a nectarine. It is a peach without fuzz.

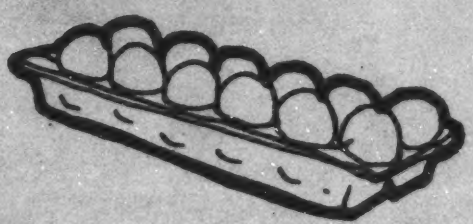
What plants would you like to combine? What would the new fruit or flower look like? What would you name it?

Invent several new plants. Draw a picture of them and name them.

TASK CARD 13

BE AN ACTOR



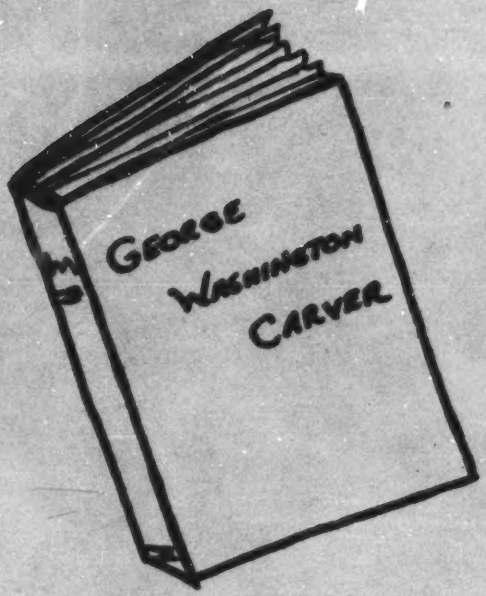


Some biologists inspect the food we eat, the water and milk we drink and the animals we raise for meat. This protects us from getting sick and it helps the grower to produce better food.

For the class, develop a skit. Pretend you are an inspector and you go to a ranch or farm. Your skit should show and tell the class:

1. How you inspect the food or animals.
2. What you find.
3. What you tell the grower to do.
4. Why inspectors are important.

Be a good actor and practice your skit.



READ A BOOK

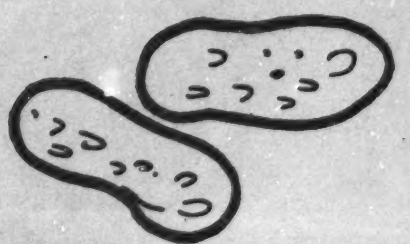
You need:

- a library book about George Washington Carver

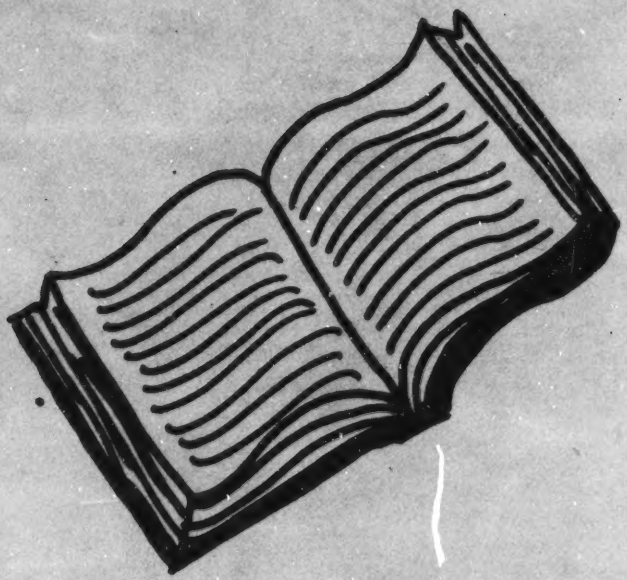
<u>or</u>

- an encyclopedia with an article about George Washington Carver

Did you know that George Washington Carver developed almost 300 products from the peanut and 118 from the sweet potato? Read a book or encyclopedia article carefully and make a report for the class.



TASK CARD 15



READ!!

You need:

- a library book about Luther Burbank

<u>or</u>

- an encyclopedia with an article about Luther Burbank

Luther Burbank improved many flower and food plants. Do you know he carried out over 25,000 experiments on the plum alone?

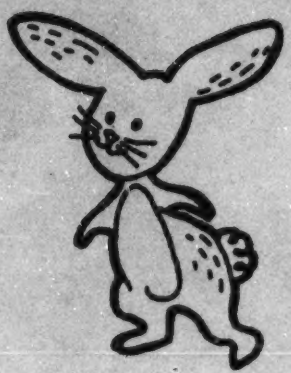
Read about the life of Luther Burbank and make a report for the class.

WHICH JOB WOULD YOU CHOOSE?

You need:

- paper
- pencil
- manila paper
- crayons

Look below at the list of things biologists do.



Do these <u>two things</u>:

1. Which five things in the list do you think are most important?
   <u>Write</u> them down.
2. Choose one job which you would like to do if you were a biologist.
   <u>Draw</u> a picture showing your job.

Biologists do these--

Find cures for diseases like cancer.

Inspect food and animals.

Help farmers produce more food.

Develop new plants and seeds.

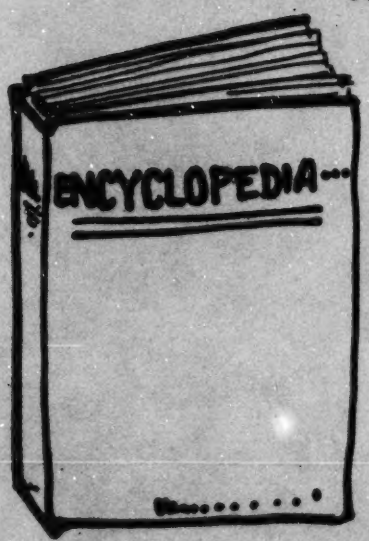
Discover new products and foods.

Experiment with plant and animal diseases.

Help the farmer control insects that eat his crops.

Help the farmer select the best crops to plant.

TOOLS OF METEOROLOGISTS



You need:

- book: Let's Go to a Weather Station, by Wolfe
- encyclopedia
- manila paper
- crayons

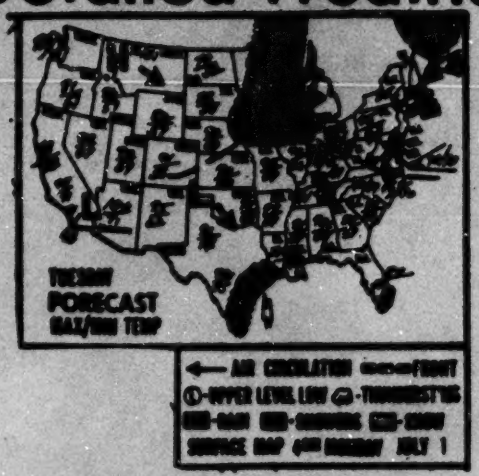
Find and draw a thermometer, weather vane, anemometer and a barometer. Explain how each one works.

SEND A WARNING!

You are a meteorologist and there is a hurricane on the way. Plan a radio broadcast to warn the people.

What will you tell them to do? When will the storm hit?

Detailed Weather Report



BE A WEATHER FORECASTER

You need:

- newspaper
- pencil
- paper

Find the weather information in the newspaper.

1. Find out what the weather was for today.

2. Read the forecast for tomorrow.

3. Write up how you would give a weather report on radio or TV.

POLLUTION

You need:

- manila paper
- crayons

You help a factory stop polluting the air with black smoke.

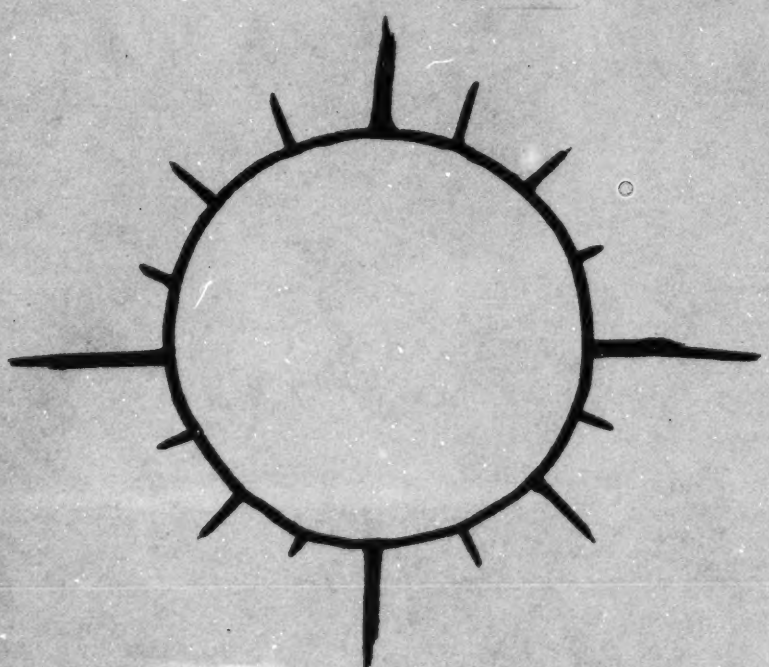
Draw a before and after picture of the factory's smoke. How did you do it?

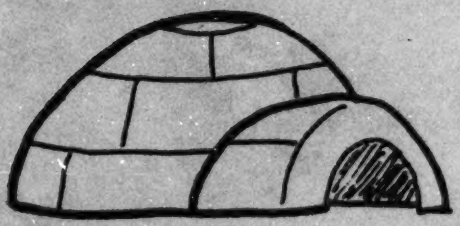
KINDS OF WEATHER

You need:

- manila paper
- crayons

Divide your paper into four parts and draw a picture showing fair weather, rain or snow, a hurricane, and a tornado. Label each picture.





BE AN ARCTIC EXPLORER

You need:

- manila paper
- crayons

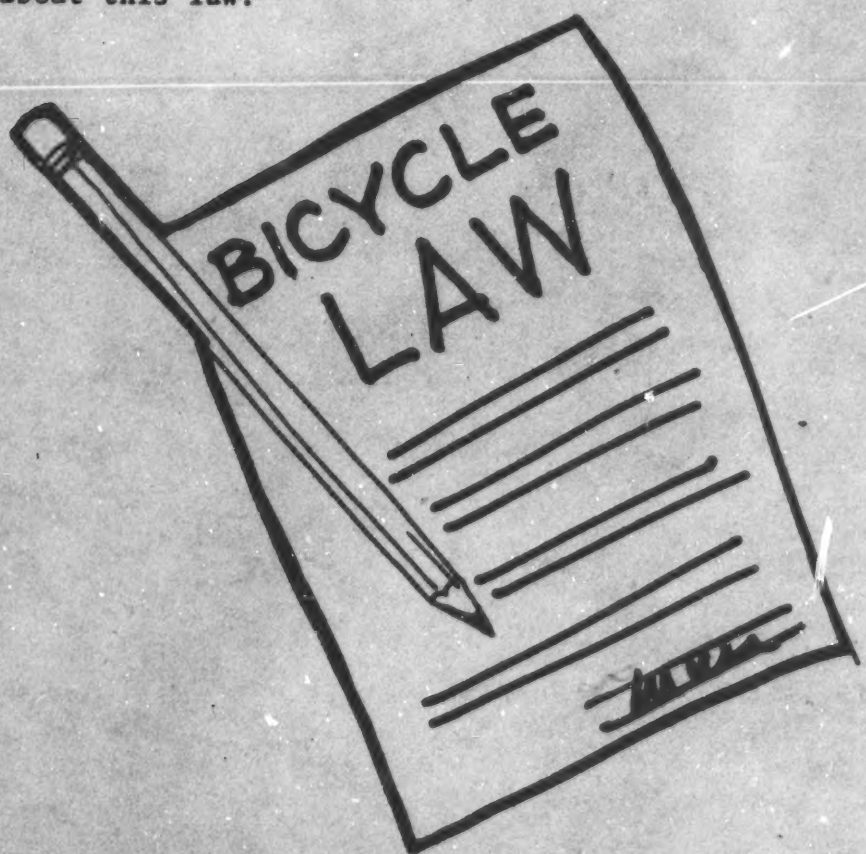
You have gone to the North Pole to set up a weather station so other scientists can explore. Draw a picture showing what you would wear and your station set up on the ice.

BE A COMMENTATOR

You need:

- paper
- pencil

Write a TV report on the new bicycle law that lets you ride your bicycle on the sidewalk. Tell the good and bad things about this law.



OPINION POLL

You need:

- pencil
- paper
- newspaper

Find a political issue in the newspaper. Ask the children in your class and other classes how they feel about it.

How many agree?

How many disagree?

How many had no opinion?

What was the result?

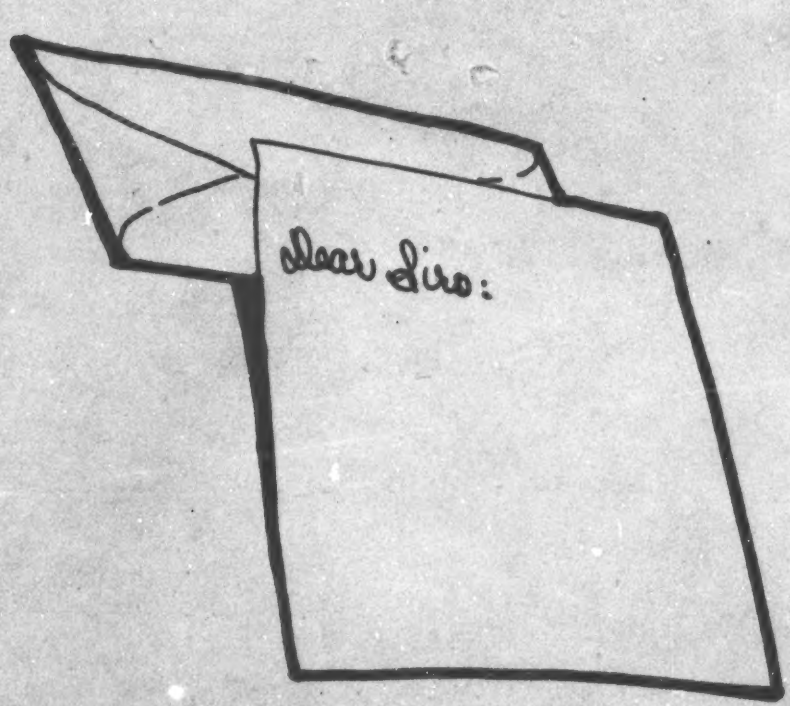
WRITE A LETTER

You need:

- pencil
- paper

Think about one of the school rules. Write a letter to the student council or the principal telling why you agree or disagree with the rule.

Make sure you give all of your reasons!



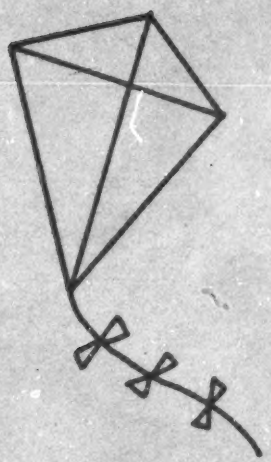
BE A HERO

You need:

- manila paper
- crayons

You have given the President of the United States a lot of help in making friends with another country.

Draw a picture showing the President giving you a medal for your fine work.



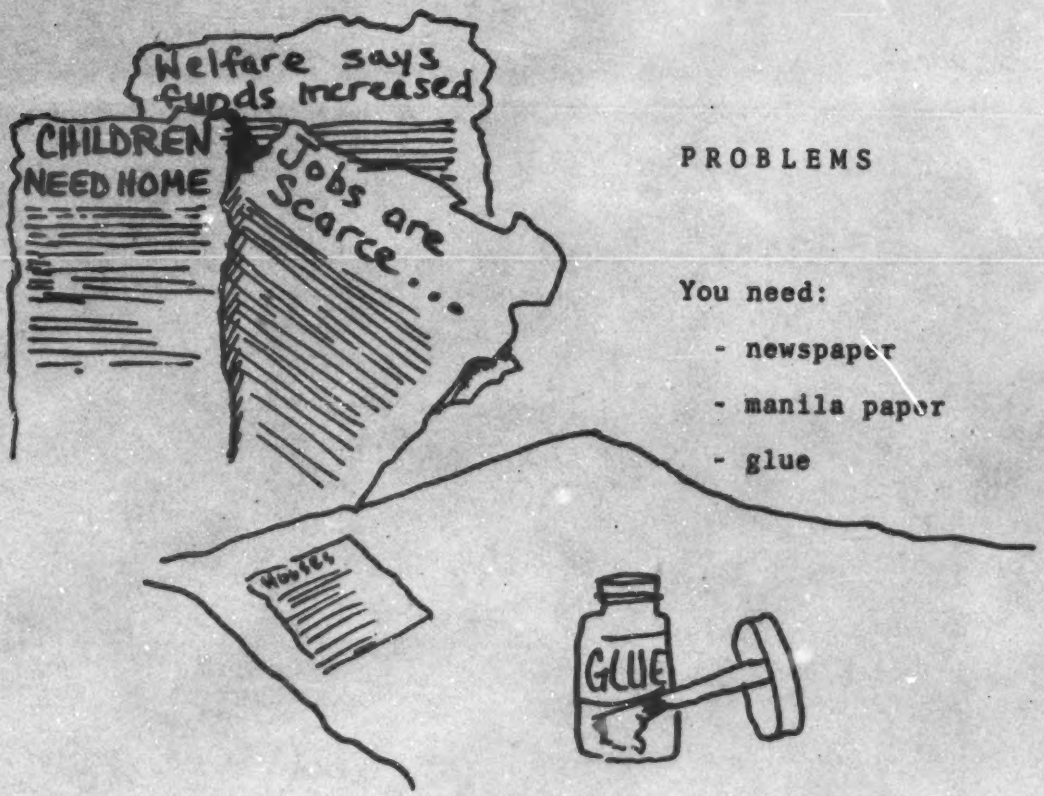
PLACE TO PLAY

You need:

- manila paper
- crayons

There is no place for children to play in your neighborhood, but there is a vacant lot overgrown with weeds and full of trash.

Draw a picture showing what the lot looked like when you first saw it. Then draw a second picture to show how it looked as a park for children.



PROBLEMS

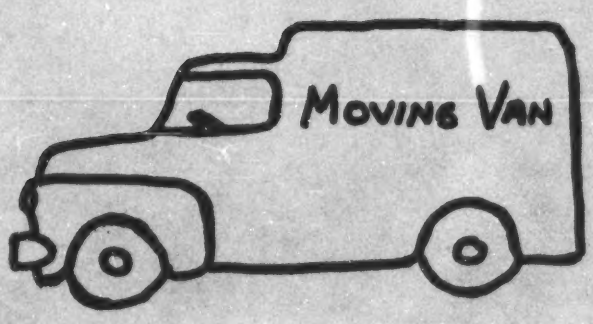
You need:

- newspaper
- manila paper
- glue

Look through the newspaper and find articles on community problems such as crime, poverty, people losing their jobs, and welfare.

Paste them on a piece of manila paper as a collage.

MOVING



You need:

- pencil
- paper

PRETEND . . .

Your father lost his job and your family had to move to a new city. You have very little money and don't know anyone that can help you.

1. What special problems would your family have?
2. What would you do first?
3. Where would you go for help?

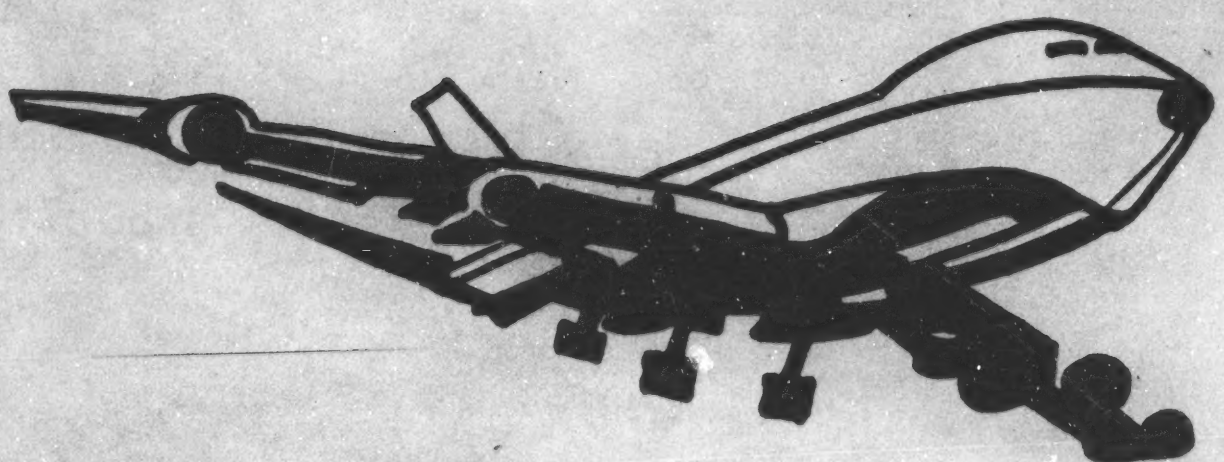
WHAT DOES YOUR CLASS THINK?

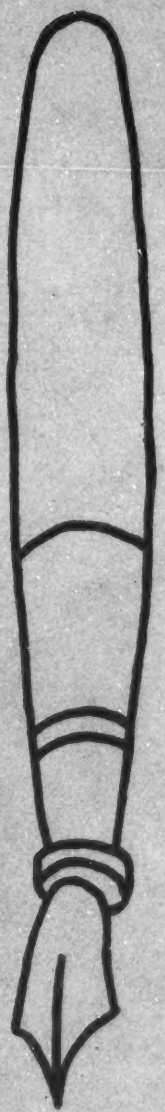
You need:

- paper
- 3" x 5" cards

Make a study of your class. Find out how many children moved from a different city.

1. Ask them why they moved.
2. Ask them if their families had any special problems getting settled.
3. Report your findings to the class.





SCHOOL CONDITIONS

You need:

- pencil
- paper

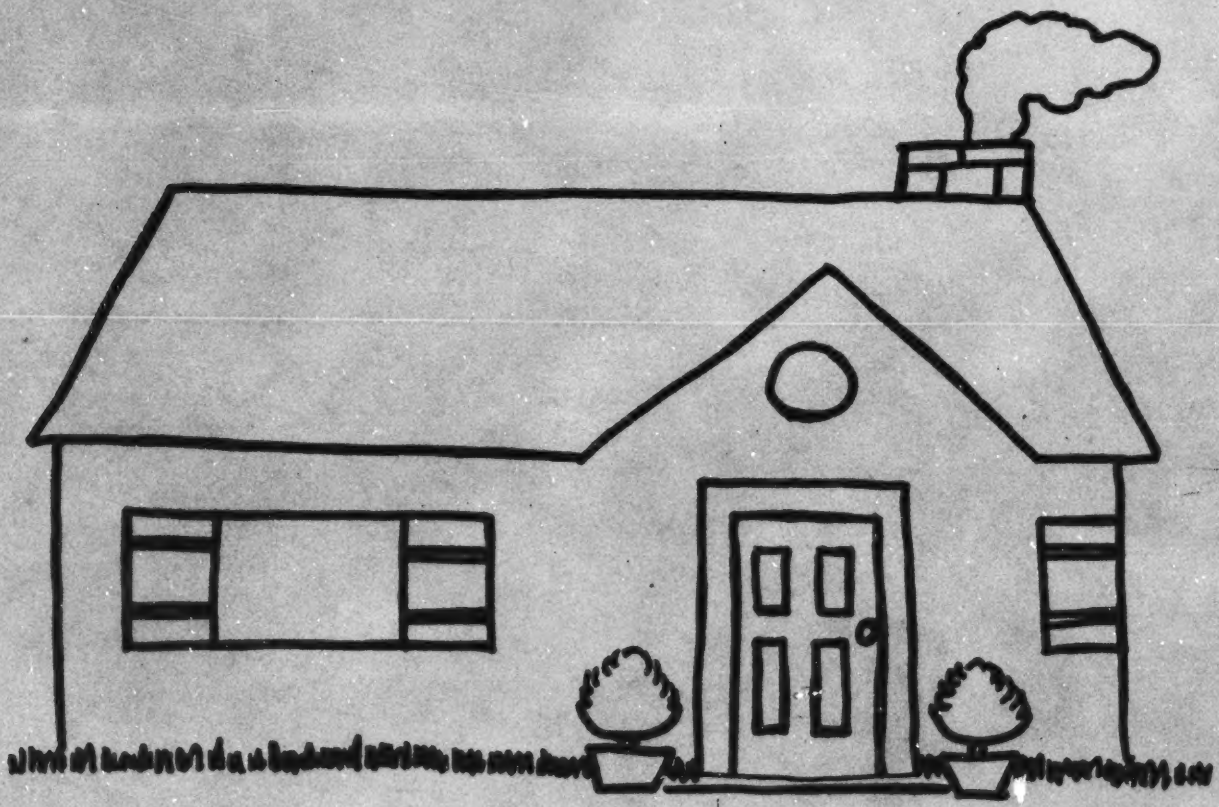
Think about one of the problems in your school.

What caused it?

How could it be solved?

Write a letter to the student council or the principal about the problem and its solution.

TASK CARD 32



BE A HELPER

You need:

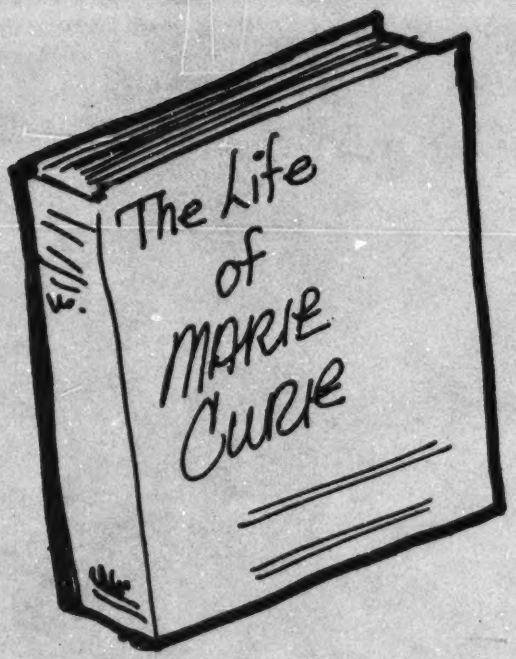
- manila paper
- crayons

Help to renew a rundown neighborhood.

Draw two pictures.

Draw a picture of how the rundown houses looked before your renewal group fixed them up.

Draw a second picture showing the houses after your group fixed them up.



BOOK REPORT

You need:

- to read a book about a scientist

Select a book about a scientist in any field we've studied. Read the book and plan a short book report. Your report should include:

1. What field of science the scientist is in.
2. Important things the scientist did.
3. How the scientist helped to make our lives better.

RESEARCH

You need:

- encyclopedia
- pencil
- paper

Look up the scientist we are studying in the encyclopedia.

List on your paper as many career opportunities as you can find for the scientist.